

a tree for an English phrase (represented by "E"). The nodes D and E on the tree in FIG. 4A are non-terminal nodes, while the nodes A, B and C represent terminal, or leaf nodes, and thus, represent the individual words in phrase E. It can be seen from FIG. 4A that phrase E is composed of a non-terminal phrase D and the English word C. The phrase D is composed of two English words A and B.

FIG. 4B illustrates the wide variety of linguistic patterns that can be used in translating the phrase E. Those phrases are identified by numerals 300, 302, 304, 306, 308 and 310. Linguistic pattern 300 illustrates that the translation of phrase E can be formed by translating the phrase D followed by a translation of the word C. Linguistic pattern 302 indicates that the translation of phrase E can be composed of a translation of the word C followed by a translation of the phrase D. Of course, since phrase D is actually made up of two words (A and B) translation of phrase D can also be performed by translating the word A and following it with the translation of the word B, or vice versa. This is indicated by patterns 304 and 306. Patterns 308 and 310 show the same type of linguistic patterns, except that the expanded translation of the phrase D follows translation of the word C.

Therefore, bi-lingual pattern data store 210 illustratively includes a plurality of English phrases (such as phrase E) followed by a corresponding plurality of linguistic patterns in

the second language (such as the linguistic patterns set out in FIG. 4B) which correspond to, and are possible linguistic translation patterns of, the English phrase E. Page 13, line 18 to page 14, line 23 (emphasis added).

From the cited text, it is clear that the components of phrase E are phrase D and words A, B and C. It is also clear that non-terminal node D (which is a phrase) represents a grouping of leaf nodes (which are words) A and B. See specifically page 13, lines 26 and 27 which state "The phrase D is composed of the two English words A and B."

It is also clear that the linguistic patterns set out in FIG. 4B show translation of different groupings of the components of English phrase "E". For instance, pattern 300 "illustrates that the translation of phrase E can be formed by translating the phrase D followed by a translation of the word C." See page 14, lines 3-5. Similarly, pattern 304 represents translation of a different grouping of the component of phrase "E". "Since phrase D is actually made up of two words (A and B) translation of phrase D can also be performed by translating the word A and following it with the translation of the word B, or vice versa. This is indicated by patterns 304 and 306." See page 14, lines 8-12. Thus, instead of translating the phrase D as a whole, it can be translated by translating its individual words.

Clearly, then, each linguistic pattern represents "a grouping of components relative to the phrase." Applicant thus submits that the language submitted in the amendment filed March 17, 2005 is fully supported by both the specification and the drawings. Therefore Applicant respectfully requests that the Examiner withdraw the rejection under 35 U.S.C. §112, first paragraph.

Because the Examiner rejected the claims based on the amended language, it appears that the Examiner ignored that language in making the rejection under 35 U.S.C. §102(b) based on Berger et al. For instance, at the bottom of page 2 and the top of page 3 of the Office Action, the Examiner rejected claims 1-16 under 35 U.S.C. §102(b) as being anticipated by Berger et al. (U.S. Patent No. 5,510,981), but did not cite any portion of Berger et al, whatsoever, as teaching the claim limitations, and specifically the claim limitations with the newly amended language. Applicant submits that no such citation can be found in Berger et al., and thus the claims are allowable over the reference cited by the Examiner.

Specifically, the independent claims 1, 6 and 12 set out linguistic patterns that are included in the translation system or process. The linguistic patterns, as described above, represent a grouping of components relative to a phrase that is being translated.

The cited reference describes a translation environment in which two target hypotheses are generated wherein each target hypothesis is "a series of words." A match score is generated for each target hypothesis that includes a language model score and a word match score. Of course, as is well known in the art, the language model score simply indicates the probability of a given word, given a prior history of the word. This corresponds to the language model score. The word match score simply scores the probability of a given word.

Neither of these scores has anything to do with a linguistic pattern, or a score for a linguistic pattern. At no point does Berger et al. teach or suggest any incorporation of any input that is even similar to a linguistic pattern (much less a plurality of linguistic patterns), wherein the linguistic pattern represents a grouping of components relative to a phrase to be translated. The scores in Berger et al. simply have

nothing to do with a pattern that represents groupings of components in the phrase to be translated.

Again, it is worth pointing out that the process described in the Berger et al. reference of generating a word match score and eventually a translation match score appears to be nothing more than use of a translation model to provide a probability of translation of a word in a first language into a word in a second language. It has nothing to do with the form of a related linguistic pattern that represents objective groupings of components relative to the phrase to be translated. The cited reference simply neither teaches nor suggests such incorporation of linguistic pattern information into the determination of an overall score.

As noted in the previous response filed in March 2005, it is also respectfully submitted that dependent claims 2-5, 7-11 and 13-16 are not only believed to be allowable based on their dependence from allowable independent claims, but also based on the subject matter in those claims. For example, claim 2 recites identifying a linguistic pattern as "indicative" of a likely phrase translation. Claim 3 recites providing an output "based on the linguistic pattern identified". Claim 4 recites "accessing a bi-lingual data store that includes linguistic patterns". Claim 5 recites "calculating a pattern probability" for linguistic patterns. Since the cited reference neither teaches nor suggests any notion of a linguistic pattern, it cannot teach these dependent claims either. Thus, Applicant respectfully submits that dependent claims 2-5 are independently allowable.

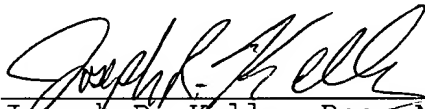
Dependent claim 7-11 and 13-16 also teach specific embodiments incorporating linguistic pattern information. It is respectfully submitted that the dependent claims of the present application are thus in allowable form for all of these additional reasons.

In sum, Applicant respectfully requests reconsideration and allowance of claims 1-16.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

WESTMAN, CHAMPLIN & KELLY, P.A.

By: 

Joseph R. Kelly, Reg. No. 34,847
Suite 1400 - International Centre
900 Second Avenue South
Minneapolis, Minnesota 55402-3319
Phone: (612) 334-3222 Fax: (612) 334-3312

JRK:slg